

Electronic Materials

Alkyl Silicate

Packing : please contact us.

Various high-purity synthetic silica, Imregnating agents, Binders, Cross-linking agents, Dehydrating agents, etc.

Characteristics

This product is high purity alkyl silicate refined through distillation after metallic silicon is reacted with alcohol. Tetramethyl orthosilicate ($\text{Si}(\text{OCH}_3)_4$), a single substance, can be easily hydrolyzed and condensed in alcohol to produce alkyl silica sol which has excellent coating and binding properties. "Methyl silicate 51" prepared by condensing tetramethyl orthosilicate to oligomerize it into the average tetramer is a high content of silica (51%) and can be safely handled.

Properties

The representative grades are shown below.

Grade	Unit	Chemical Composition (Molar ratio)	Physical property (at 25°C)	Physical property (at 25°C)
Molecular Formula		$\text{Si}(\text{OCH}_3)_4$	$\text{CH}_3\text{O}(\text{Si}(\text{OCH}_3)_2)_2\text{OCH}_3$	$\text{Si}(\text{OCH}_3)_7\text{Si}$
Molecular Weight		192.8	479.7	294.4
Specific Gravity (25°C)	-	1.00	1.18	0.91
Viscosity (25°C)	mPas	0.8	2	1.3
Appearance		Colorless transparent	Colorless transparent	Colorless transparent
Density (APHA)	-	Below 10	Below 20	Below 20
Silica content	%	99	51	22.7
Purity (by GC)	%	99.0 or more	(Oligomer mixture)	95.0 or more
Alkaline Metals Impurities	ppb	Below 100	Below 100	Below 100
Heavy Metals Impurities	ppb	Below 100	Below 100	Below 100

Applications

Various high-purity synthetic silica : Various high-purity synthetic silica, Binders, Cross-linking agents, Dehydrating agents, etc.



Precaution in Handling

The Fire Services Act, the 4th class, the 2nd petroleum type products (water-soluble) Tetramethyl orthosilicate vapor, when exposed to comes, gradually causes corrosion, which in turn leads to severe pain. Wear double-type protective glasses and handle tetramethyl orthosilicate in a well-ventilated place.